UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,451	10/03/2000	Nobuyuki Tanaka	13943	4567

23389   7590   09/02/2003

SCULLY SCOTT MURPHY & PRESSER, PC
400 GARDEN CITY PLAZA
GARDEN CITY, NY 11530

EXAMINER
AKHAVANNIK, HUSSEIN

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-7</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7</u> is/are rejected.

7)☒ Claim(s) <u>3</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 October 2000</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3,5</u> .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

On page 21, line 14, "204" should be changed to "206" to correspond to figure 2.

On page 28, line 12, "covnerter" should be changed to "converter".

Appropriate correction is required.

2.   Claim 3 is objected to because of the following informalities: "an IDCT covnerter"

should be changed to "an IDCT converter".

Appropriate correction is required.

Drawings

3.   The drawings are objected to because figure 3 contains a spelling mistake. "P-Piture"

should be changed to "P-Picture".

A proposed drawing correction or corrected drawings are required in reply to the Office

action to avoid abandonment of the application. The objection to the drawings will not be held

in abeyance.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claims 1, 3-4, and 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Referring to claims 1 and 3-4, these claims recite "an electronic watermark data table for storing first to j-th electronic watermark data and electronic watermark data of (j * 2) types having said movement, for each picture type." This limitation is not clearly understood. By storing the first to j-th electronic watermark data and the j * 2 type electronic watermark data for each picture type, then j + j(j*2) electronic watermark data would be stored by the electronic watermark data table. This is inconsistent with the specification and does not distinctly claim the watermark data table.

Claim 6 recites the limitation "said multiplication coefficient" in lines 14-15. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the electronic watermark data inserter" in lines 18-19. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "said electronic watermark table" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7.   Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Satoh et al (U.S. Patent No. 6,175,639).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Referring to claim 7,

i.   A decoder for extracting and decoding block data of a size of k * k pixels decoded by the electronic watermark data inserter is illustrated by Satoh et al in figure 10 by the decode unit 1010. Satoh et al explain that the decode unit receives MPEG data with the watermark data inserted in column 19, lines 12-16.

ii.   An IDCT converter for IDCT converting the block data decoded is illustrated by Satoh et al in figure 10 by the inverse DCT unit 1020.

iii.   An electronic watermark extractor for obtaining the number of electronic watermark data to be extracted based on information on the location where the block data of a k * k pixel size is extracted and then extracting electronic watermark data from data after the IDCT conversion output from the IDCT converter is illustrated by Satoh et al in

figure 11 by step 1103. The watermark is extracted by using the watermark data extracting unit 1040, illustrated by Satoh et al in figure 10.

iv.   Storing data extracted by the electronic watermark data extractor is illustrated by Satoh et al in figure 11 in step 1103. In order to extract the watermark data and then process it, as in step 1106 of figure 11 illustrated by Satoh et al, the data would have to be stored to later transmittal.

v.   An electronic watermark data detector for extracting electronic watermark data at a corresponding location by means of the extracted data storage means and the electronic watermark table after the extracted data storage means has stored extracted data for one screen and then calculating a statistical similarity and outputting a calculation result is illustrated by Satoh et al in figure 11 by steps 1104, 1105, and 1107. Step 1104 calculates the total value for extracted data on a screen. Step 1105 supplies watermark data corresponding to a picture type from the electronic watermark tables (1081, 1082, and 1083) illustrated by Satoh et al in figure 10. Step 1107 calculates and outputs a similarity value between the extracted data and the watermark to judge the presence of watermark data.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al

(U.S. Patent No. 6,175,639) in view of Kim et al (Kim, S.-W. et al., "Perceptually Tuned Robust

Watermarking Scheme for Digital Video using Motion Entropy Masking," IEEE Proc. Int. Conf.

on Consumer Electronics, Jun. 1999, pp. 104-105).

Referring to claim 1,

i.   A DCT converter for extracting a block of k * k pixels from an original image,

subjecting the block to DCT, and outputting data after the DCT conversion is illustrated

by Satoh et al in figure 8 by the DCT unit 810. Satoh et al explain in column 17, lines

44-51 that the DCT unit extracts an 8 * 8 block from an original image.

ii.   Quantizing DCT coefficients output from the DCT converter is explained by

Satoh et al in column 18, lines 57-60.

iii.   Deciding the magnitude of a movement based on a generation amount from the

DCT converter is not explicitly explained by Satoh et al. However, Kim et al do illustrate

determining the magnitude of a movement in the DCT domain in figure 1 by the motion

entropy masking. Kim et al explain that M_b is the motion information (e.g. motion vector

that contains direction and magnitude) for a block b on page 105, first column, third and

fourth paragraphs. Kim et al explain that determining the magnitude of motion in video

is beneficial because the human visual system decreases its sensitivity to the motions as

the number of motions increases on page 105, first column, third paragraph. Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was

made to determine the magnitude of a movement in video in a watermarking system

based on DCT coefficients, such as the system of Satoh et al, to more effectively embed the watermark.

iv.   Deciding a picture type is explained by Satoh et al in column 17, lines 52-59. Satoh et al explain inserting a proper watermark depending on the picture type in MPEG video and would therefore have to detect the picture type of each frame before embedding the correct watermark.

v.   A electronic watermark data table for storing first to j-th electronic watermark data and electronic watermark data of (j * 2) types having a movement for each picture type is not explicitly explained by Satoh et al. Satoh et al do explain a watermark table having j (corresponding to 3 for the 3 picture types in MPEG video: I, P, and B) electronic watermark data in column 17, lines 30-43. However, Satoh et al do not explicitly explain watermark data of (j * 2) types having a movement for each picture. Kim et al do explain determining the motion of a block in a frame of MPEG video on page 105, first column, third to fourth paragraph. Kim et al then further explain scaling the watermark (JND) by the motion entropy ($w_{u,v,b}$) on page 105, first column, fifth paragraph. Kim et al explain thresholding the original image DCT coefficients by the watermark coefficients values on page 105, first column, fifth paragraph. Therefore, two groups of coefficients are explained by Kim et al; those that are watermarked and those that are not (take zero). By incorporating the motion determination and thresholding of Kim et al into the watermark table of Sato et al, there would be j * 2 types of watermarking data, which have been optimized for movement within the video. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to have j * 2 types of watermarking data based on a picture type and

movement in video in order to more effectively (increase imperceptibility) embed a

watermark in a frame of video.

vi.   Selecting the electronic watermark data of one type according to the picture type

and the movement is not explicitly explained Satoh et al. However, generating a

watermark table according to a picture type and movement corresponds to section v of

this claim explained above. Satoh et al does explain selecting a specific watermark from

a table to insert into a corresponding frame in column 17, line 66 to column 18, line 4.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to select an electronic watermark according to a picture type and

movement, as the table of Satoh et al and Kim et al is created with reference to both

parameters.

vii.   Inserting the electronic watermark data into the data after DCT conversion is

explained by Satoh et al in column 17, lines 52-59 and illustrated in figure 8 by the

watermark data inserting device 820.

viii.   Deciding the magnitude of a movement by obtaining a difference between a DCT

coefficient of a front frame and a DCT coefficient of a rear frame and an electronic

watermark data with a suitable strength being inserted according to the magnitude of the

movement is not explicitly explained by Satoh et al. However, Kim et al explain using

24 sets (frames) in determining the motion vector for a frame on page 105, first column,

fourth paragraph. Kim et al explain that each block corresponds to a set, which is the

block's respective frame. Kim et al also explain on page 105, first column, fifth

paragraph that the watermark coefficients are scaled by the motion entropy calculated.

Thus, the watermark coefficients are embedded with a suitable strength according to the

magnitude of the motion detected between the frames. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to determine

the magnitude of movement between DCT coefficients of succeeding frames and

inserting a watermark of suitable strength in an original image so that the watermark is

embedded in video more effectively (increased imperceptibility).

Referring to claim 3,

i.   A DCT converter for extracting a block of k * k pixels from an original image,

subjecting the block to DCT, and outputting data after the DCT conversion corresponds

to claim 1i.

ii.   Quantizing DCT coefficients output from the DCT converter corresponds to claim

1ii.

iii.   Deciding the magnitude of a movement based on a generation amount from the

DCT converter corresponds to claim 1iii.

iv.   Deciding a picture type corresponds to claim 1iv.

v.   An electronic watermark data table for storing first to j-th electronic watermark

data and electronic watermark data of (j * 2) types having a movement for each picture

type corresponds to claim 1v.

vi.   Selecting the electronic watermark data of one type according to the picture type

and the movement corresponds to claim 1vi.

vii.   Inserting the electronic watermark data into the data after DCT conversion

corresponds to claim 1vii.

viii.   Inverse quantizing a block of k * k pixels in which the electronic watermark data

is inserted is explained by Satoh et al in column 19, lines 12-16.

ix.   Performing an IDCT of a block of k * k pixels in which the electronic watermark

data inverse-quantized is inserted is explained by Satoh et al in column 19, lines 16-20.

10.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Florencio et al

(U.S. Patent No. 6,208,745) in view of Kim et al.

Referring to claim 2,

i.   A DCT converter for extracting a block of k * k pixels from an original image,

subjecting the block to DCT, and outputting data after the DCT conversion is explained

by Florencio et al in column 3, lines 43-56.

ii.   Quantizing DCT coefficients output from the DCT converter is explained by

Florencio et al in column 3, lines 56-58.

iii.   Deciding the magnitude of a movement based on a generation amount from the

DCT converter is not explicitly explained by Florencio et al. However, Kim et al do

illustrate determining the magnitude of a movement in the DCT domain in figure 1 by the

motion entropy masking. Kim et al explain that M_b is the motion information (e.g.

motion vector that contains direction and magnitude) for a block b on page 105, first

column, third and fourth paragraphs. Kim et al explain that determining the magnitude of

motion in video is beneficial because the human visual system decreases its sensitivity to

the motions as the number of motions increases on page 105, first column, third

paragraph. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the magnitude of a movement in video in a watermarking system based on DCT coefficients, such as the system of Florencio et al, to more effectively embed the watermark.

iv.   Deciding a picture type is explained by Florencio et al in column 4, line 57 to column 5, line 7. Florencio et al explain inserting a proper watermark depending on the picture type in MPEG video and would therefore have to detect the picture type of each frame before embedding the correct watermark.

v.   Storing an original watermark data is illustrated by Florencio et al in figure 1 by the watermark processor 104. The watermark processor is explained by Florencio et al to generate a watermark in column 4, lines 44-56.

vi.   j first multipliers for subjecting the original watermark to multiplication data according to the picture type is explained by Florencio et al in column 4, line 57 to column 5, line 7. Florencio et al explain making the watermark more or less prominent within a display by adjusting (multiplying) the amplitude of the DCT coefficients of the watermark. The adjustment is performed depending on the frame type detected. Specifically, Florencio et al explain adjusting the original watermark when embedding the watermark in the I or P frames because the watermark will appear on the screen for longer durations in these frames due to the inherent nature of MPEG encoding. In the system of Florencio et al, there would be 3 (corresponding to j) multipliers due to the 3 types of frames.

vii.   An electronic watermark table for storing the electronic watermark data of the j

types ranging form the first electronic data to the j-th electronic watermark data being

outputs from the j multipliers is illustrated by Florencio et al in figure 2 by the data

storage device 200 of the watermark processor 104 which is capable of storing the j

watermarks output from the multipliers explained in part vii of this claim.

viii.   Selecting electronic watermark data of one type among the electronic watermark

data of j types is explained by Florencio et al in column 5, lines 47-58. Florencio et al

explain choosing a watermark using the watermark generator (208 of figure 2), such as

digitized logo or company name which is adjusted by the j multipliers corresponding to

the j pictures types of MPEG video.

ix.   Subjecting the selected electronic watermark data to multiplication according to

the magnitude of a movement obtained based on a difference between the DCT

coefficients is not explicitly explained by Florencio et al. However, Kim et al do explain

determining the motion of a block in a frame of MPEG video on page 105, first column,

third to fourth paragraph. Kim et al then further explain scaling (multiplying) the

watermark (JND) by the motion entropy ($w_{u,v,b}$) on page 105, first column, fifth

paragraph. By incorporating the motion determination and thresholding of Kim et al into

the stored watermark table of Florencio et al, the frame type selected watermark data

would be optimized for movement within the original video. Therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to

subject the selected watermark data to multiplication according to the magnitude of

movement obtained in order to more effectively (increased imperceptibility) embed a

watermark in a frame of video.

x.   Inserting electronic watermark data obtained through multiplication by the second

multiplier into data after the DCT conversion is explained by Florencio et al in column 5,

line 59 to column 6, line 10 wherein the watermark is inserted into the bitstream by the

watermark encoder.

xi.   Deciding the magnitude of a movement by obtaining a difference between a DCT

coefficient of a front frame and a DCT coefficient of a rear frame and an electronic

watermark data with a suitable strength being inserted according to the magnitude of the

movement is not explicitly explained by Florencio et al. However, Kim et al explain

using 24 sets (frames) in determining the motion vector for a frame on page 105, first

column, fourth paragraph. Kim et al explain that each block corresponds to a set, which

is the block's respective frame. Kim et al also explain on page 105, first column, fifth

paragraph that the watermark coefficients are scaled by the motion entropy calculated.

Thus, the watermark coefficients are embedded with a suitable strength according to the

magnitude of the motion detected between the frames. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to determine

the magnitude of movement between DCT coefficients of succeeding frames and

inserting a watermark of suitable strength in an original image so that the watermark is

embedded in video more effectively (increased imperceptibility).

11.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al in view

of Kim et al, and further in view of Florencio et al.

Referring to claim 4,

i.   A DCT converter for extracting a block of k * k pixels from an original image, subjecting the block to DCT, and outputting data after the DCT conversion corresponds to claim 1i.

ii.   Quantizing DCT coefficients output from the DCT converter corresponds to claim 1ii.

iii.   Deciding the magnitude of a movement based on a generation amount from the DCT converter corresponds to claim 1iii.

iv.   Deciding a picture type corresponds to claim 1iv.

v.   An electronic watermark data table for storing first to j-th electronic watermark data and electronic watermark data of (j * 2) types having a movement for each picture type corresponds to claim 1v.

vi.   Selecting the electronic watermark data of one type according to the picture type and the movement corresponds to claim 1vi.

vii.   Inserting the electronic watermark data into the data after DCT conversion corresponds to claim 1vii.

viii.   A Huffman encoder for encoding data after insertion of the electronic watermark data is not explicitly explained by either Satoh et al or Kim et al. However, Florencio et al do explain Huffman encoding DCT coefficient data in column 7, lines 10-16. It is well-known in the art to use Huffman encoding for lossless image (or frame) compression. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Huffman coding to compress the watermarked

frames of Satoh et al and Kim et al in order to minimize distortion caused by the

compression of the DCT coefficients.

12.   Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florencio et al

in view of Kim et al, and further in view of Satoh et al.

Referring to claim 5,

i.   A DCT converter for extracting a block of k * k pixels from an original image,

subjecting the block to DCT, and outputting data after the DCT conversion corresponds

to claim 2i.

ii.   Quantizing DCT coefficients output from the DCT converter corresponds to claim

2ii.

iii.   Deciding the magnitude of a movement based on a generation amount from the

DCT converter corresponds to claim 2iii.

iv.   Deciding a picture type corresponds to claim 2iv.

v.   Storing an original watermark data corresponds to claim 2v.

vi.   j first multipliers for subjecting the original watermark to multiplication data

according to the picture type corresponds to claim 2vi.

vii.   An electronic watermark table for storing the electronic watermark data of the j

types ranging form the first electronic data to the j-th electronic watermark data being

outputs from the j multipliers corresponds to claim 2vii.

viii.   Selecting electronic watermark data of one type among the electronic watermark

data of j types corresponds to claim 2viii.

ix.   Subjecting the selected electronic watermark data to multiplication according to

the magnitude of a movement obtained based on a difference between the DCT

coefficients corresponds to claim 2ix.

x.   Inserting electronic watermark data obtained through multiplication by the second

multiplier into data after the DCT conversion corresponds to claim 2x.

xi.   Inverse-quantizing a block of k * k pixels in which the electronic watermark data

is inserted is not explicitly explained by Florencio et al or Kim et al. However, Satoh et

al explain inverse-quantizing a block of k * k pixels in column 19, lines 12-16. It would

have been obvious to one of ordinary skill in the art at the time the invention was made to

inverse-quantize a block of k * k pixels so that a quantized image may be uncompressed.

xii.   Performing an IDCT is not explicitly explained by Florencio et al or Kim et al.

However, Satoh et al explain performing an IDCT in column 19, lines 16-20. It would

have been obvious to one of ordinary skill in the art at the time the invention was made to

perform an IDCT on watermarked DCT coefficients so that the watermarked image may

be viewed in the spatial domain.

Referring to claim 6, the first multiplier and the second multiplier being omitted with the

multiplication coefficient is 1 is not explicitly explained by Florencio et al, Kim et al, or Satoh et

al. However, it is obvious that that a number multiplied by 1 is the original number. Therefore,

it would have been obvious to one of ordinary skill in the art at the time the invention was made

to omit the first and second multipliers when the multiplication coefficient is 1, as the

multiplication would not serve any purpose and computation time and power would be

conserved.

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

> Rhoads (U.S. Patent No. 6,587,821) – To explain that active motion scenes with
>
> various areas of high detail can generally tolerate more visual energy in a
>
> watermark as explain in column 1, lines 55-61.
>
> Conover et al (U.S. Patent No. 6,373,960) – To exhibit embedding watermarks in
>
> selected frames of MPEG video as explained in column 9, line 55 to column 10,
>
> line 5.
>
> Ahmed (U.S. Patent No. 6,512,837) – To exhibit using temporal metrics to adjust
>
> a watermark that is embedded into MPEG video as explained in column 4, lines
>
> 41-50.
>
> Depovere et al (U.S. Pub. No. 2002/0087864) – To exhibit using motion
>
> estimation to determine a weighting factor for embedding watermarks into
>
> compressed video as illustrated in figure 2.

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hussein Akhavannik whose telephone number is (703)306-4049.

The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Leo H. Boudreau can be reached on (703)305-4706. The fax phone number for the

organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703)305-3900.

Hussein Akhavannik |-\ -A .
August 18, 2003

LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600